

The study of the emotional effect in face perception by recording eyeblink component of startle reaction

B.G. Meshcheryakov
M.M. Gizatullin
A.I. Nazarov

It is assumed that lack of distinct face expression effect on startle response modulation in previous research is due to multifactorial nature of the emotional face effect. The experiment was conducted to assess the emotional effect of faces and their parts by measuring amplitude of eyeblink reaction caused by acoustic start stimulus imposed during observation of different facial stimuli. Dependence between EMG amplitude of startle reaction and variety of factors was analyzed: time delay of acoustic startle stimulus from onset of target visual stimulus; expression (joy, neutral, fear); image type (whole face, face part – comparison effects of whole face and its parts nobody had done before); sex of the expresser and gender of subject. The results show that efficiency of modulation by eye part was higher not only in comparison with the mouth part but with whole face. Although the main effect of expression is not significant, there is a significant triple interaction of "Expression * sex of expresser * Gender of subject" (at a delay of 3.5 s). This means that the effect of facial expression stimuli is characterized by double sexual specificity – the emotional effect of the expression (fear or happiness) depends on whether observed face is male or female, and depends on who was looking at him/her – a man or a woman. These results are consistent with notion of multivariate emotional effect of faces and their parts. Evidence is presented that this effect is not adequately reflected in subjective (explicit) estimates of faces pleasantness, that's why development and use methods of objective assessment have great significance in theory and practice.

Key words and phrases: face perception; multivariate unconscious emotional face effect; startle reaction; eyeblink amplitude; face parts.

Information about the authors

B.G. Meshcheryakov – Ph.D.in Psychology, Professor of Psychology Department at International University of Nature, Society and Man «Dubna».

E-mail: borlogic@yahoo.com

M.M. Gizatullin – Master of Psychology, Graduate of Psychology Department at International University of Nature, Society and Man «Dubna».

E-mail: gizatull@gmail.com

A.I. Nazarov – Ph.D. in Psychology, Senior researcher, Associate professor of the Psychology Department at the International University of Nature, Society and Man «Dubna».

E-mail: koval39@inbox.ru